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THE TIDES OF UR AND HUMAN PROGRESS:

FOUR CONJECTURES ON THE ORIGIN OF KSAV IVRI – [THE PARENT OF THE WORLD'S MOST WIDELY USED WRITING SYSTEMS] -AND MAJOR ADVANCES IN ASTRONOMY & MATHEMATICS[1]

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Recently, **L. FORTI, et al**[2] found tidal deposits near the ruins of Ur -- dating from the time - close to 5,000 years ago - when Ur sat on the shore of an arm of the Persian Gulf. They mention "a large cul-de-sac open to the Persian Gulf where tides were probably amplified"[p.176]. Today, the analogous corner of the Persian Gulf has tides with an amplitude of 4 meters, twice a day.[3] In what was then and now a very flat - sometimes marshy - land, accurate knowledge of what to expect from such tides was essential for the prosperity of the city. **It is well established that the moon-god was chief god of Ur.**[4]

CONJECTURE A. The moon-god was made Ur's chief god because Ur's leaders correctly linked the pattern of the tides to the moon. Accurate knowledge of the tidal pattern was not only key to Ur's prosperity but also to both its founding & defense. This situation led to a hereditary group of moon-god priests who made KEY ADVANCES IN ASTRONOMY & MATHEMATICS -- but didn't publish their results. These are the 1st elements in HUMAN PROGRESS that I am linking in this conjecture to the TIDES OF UR.

About 4K years ago, Ur was successfully attacked, the temple of the moon-god was ransacked and the priests of the moon-god fled as a cohesive group to the pre-existing outpost/supply city of Ur, Harran -~1000km to the NW. They continued in strength in Harran as hereditary priests of the moon-god -- and leaders in mathematics & astronomy- for the next 3+ millennia.

Their direct observation of the effects of the moon on the tides and, very likely, their awareness that the rising of the star Sirius presaged the rising of the Nile – may've led **some** of these priests to a general belief in the influence of the 'stars' on the details of the life of each person. They became key promoters of astrology. This would be analogous to the way Galen & his disciples promoted "bleed them 'til they faint" as a basic treatment for pneumonia- & killed millions of their own patients with this absurd treatment for the better part of 2 millennia.[5]

When the moon-god priests arrived in strength in Harran, they were no longer needed to predict the tides - to help defend the city. However, **some** of them – the promoters of astrology- felt they could "help" people understand their future by applying their astrological principles. To demonstrate they actually knew the ways of the stars, they could predict when the moon would occult planets & even some of the brightest stars in the zodiac - like Aldebaran: the bright, 'bull's eye' of Taurus. They could probably also predict partial solar eclipses – with crescent shaped 'pinhole camera' images seen in the shadows of trees.[6] As a result of monitoring & predicting positions of the heavenly bodies for centuries - in connection with their study of tides- their predictions would be far better than any others - & very impressive.

However, the idea that the stars control the lives of people, contradicted the Semitic-Abrahamic sense of the world prevalent in Harran: that people were responsible for their own actions & betterment -- even as one benevolent God created & controlled the World.

The idea that the 'star' one is born under controlled one's life & destiny- was also opposed to the actual life experience of 2 interrelated groups: older shepherds & associations of midwives – including the midwives of Ur. Shepherds regularly saw both sheep & goats giving birth to look-alike twins within 15 minutes of each other -- born under the same 'star' -- yet coming to very different fates: one eaten for dinner within its 1st month -- or killed by wolves - the other living over a decade[7]. The midwives would also see twins born under the same star -- some from the same mother & some 'time twins'[8]. Often, one died in its first year- with the other living to adulthood.

The moon-god priests could have consulted with the midwives in Ur & related cities - or even organized studies to test their ideas. It is plausible that, like the doctors who killed their own patients with blood-letting, those moon-god priests who continued with astrology in Harran for 3,000+ yrs, believed so strongly in the truth of what they were doing, that they didn't make such inquiries. It's likely, however, that some moon-god priests & associated midwives did such studies, separated from astrologers & even joined Avroham, Sarah and shepherdess-midwives to oppose their former colleagues.[9]

The challenge for Avroham, Sarah & their group was how to effectively protect & promote their own traditions & world-views in the face of the impressive machinations & propaganda of the astrologer-priests who now controlled the Harran region.

CONJECTURE B. Avroham, Sarah - with independent merchant shepherds, associated midwives & others in the Harran area – including converts from Ur- created A SYSTEM FOR 'SPEED LEARNING' - so any Hebrew speaking adult or child of normal intelligence could learn to read in a few hours - even while walking. With a bit more time, they'd learn to write on treated skins from their sheep. This was the time, place and reason for the creation of the Ksav Ivri writing system.

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[1] These 2 pages summarize the author's forthcoming book: *'LEARNING FROM THE KSAV IVRI -'PALEO HEBREW'- ALEPH-BES About the life & times of the people who 1st used it & what it means for us today'*.~95k+ words, 450+ refs, 50+ illustrations, part of the author's Sefer Chidushei Torah. [See note 5, below.] See also Internet Archive &/or YouTube of the author's zoom lecture at: https://archive.org/details/IvriScript ; or GOOGLE: "IVRI SCRIPT" https://www.youtube.com/watch?v=YZ4kkikBEN4 . For more about the author, see his study of myopia, §10 https://www.nli.org.il/he/books/NNL_ALEPH997010857514005171/NLI

[2] Luca FORTI, et al, 2022,'The Paleoenvironment and Depositional Context of the Sumerian Site of Abu Tbeirah (Nasiriyah, S. Mesopotamia, Iraq', Quaternary Res. 1–19. https://doi.org/10.1017/qua.2022.22 salvatore.milli@uniroma1.it

[3] Ali A. LAFTA, 2023 "General characteristics of tidal currents in the entrance of Khor Abdullah, northwest of Arabian Gulf" Oceanologia 65 (2023) 494–502 https://www.sciencedirect.com/science/article/pii/S0078323423000283

[4] H. CRAWFORD "Ur, The City of the Moon God" Bloomsbury Academic, 2015, 160 p. This book has 'moon god' 17× & no mention of 'tide', 'tides' or 'tidal'.

[5] See: 'THE QUESTION OF BLOODLETTING', p133-7 in "אומרים שבעים" - 'THEY SAY SEVENTY', A.S.Adler, 318+ pgs, ~340K+ words, Jerusalem, 5786 / 2025

[6] Total eclipses are very rare, a few minutes long & difficult to predict, except once begun.

[7] This is a key idea of the Yom Kippur Temple Service: 2 goats of similar look & background – bought at the same time from the same seller & almost certainly twins - were sent to very different fates on the basis of a random lot. [Lev. 16:5-10, Yoma 6:1 [Bavli 62a] This shows that what appears to be random is understood to be from HaShem & twins born under the same 'star'- have very different fates – determined by HaShem, not the stars.

[8] 'Time twins' are born at the same time, in the same area, but have different mothers.

[9] There's a possibility the 22-letter count is from such a linkage: between the Shepherd Society & converts from moon-god priests & midwives -see note 10.

This writing system has multiple mnemonic-didactic devices so that with very little initial instruction, the letters and their order would almost be able to teach themselves: The letter's shape reminded the reader of its name & sound. The letter's sound reminded one of its name & its name reminded one of its shape. The order of the letters was such that if a one forgot a letter but remembered the letter before or after, they would be reminded of the letter they'd forgotten. The total number of letter shapes - each with a distinctive name - was limited to 22[10] -- enough for a person conversant in Hebrew.

The number of strokes per letter was also kept low -- to make it easier to learn to write - and write quickly. This compared with hundreds of syllables of seemingly arbitrary shape and high stroke count one had to learn with the moon-god priest's writing system. This earlier system tended to restrict literacy to those who had the time -- months or years[11] -- and permission -- to sit in a school and learn it.

CONJECTURE C. Abraham, Sarah & their co-inventors of the Aleph-Bes, saw that, though it could be used to read & write anything, the ideas they thought were most valuable would come to the fore. Ideas the inventors thought destructive, would defeat each other by their many mutual contradictions & be tolerable back-ground noise. This would apply, e.g., to astrology & idol worship. IT WAS AN INVENTION FOR FREE SPEECH.

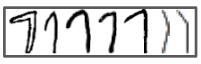
CONJECTURE D. THE INVENTORS OF KSAV IVRI, IN EFFECT, SIGNED THEIR INVENTION -- by the signs they chose for their letters, their order in the set, the direction of writing and, maybe, even the count of 22[10].

The first letter, ***Aleph***, resembles the head of the bull in constellation Taurus.[12] It is not a profile - like the cattle in Egyptian hieroglyphs. It lacks the 'eye' of the constellation -- suggesting avoidance of even the appearance of idol worship in the letters. It's first because Taurus at that time, ~4,000yrs ago, was connected with the first lunar month in the shepherd's calendar -the month that included the spring equinox.[13] This was a month when the shepherd family would be together, just after lambing season.

This also put the 7th letter[11] -- a balance scale for heavy things[14] -- in line with the 7th lunar month -- which usually included the autumnal equinox – a balance of day & night. This was another time when shepherd families would all be together.

The 5th letter is ***He***.[11] It depicts a one-hand tool for combing freshly plucked wool. It isn't a picture of a person in exultation - as some Egyptologists say. Its use with one hand gives it 5th place.

The 9th letter, ***Tes***, is a ball of yarn.[11] Spinning yarn was the work of adult shepherdesses--most associated with the number 9 -- the months of pregnancy- & the profession of midwifery.



The 3rd letter—***Gimmel***[11] -- gives us a sign of where this invention took place. It's a schematic profile of the head and neck of a camel. As can be seen with the 5 gimels, it's about twice as wide as the 2 throwstick hieroglyphs from which Egyptologists say it is derived. People like shepherds who have meat 'on the hoof' don't use throwsticks to hunt ducks in swamps.

This letter shows camels were important to the inventors of the writing system - but why was it made the 3rd letter? When a Bactrian camel turns its head to the side, its head+neck have the same shape and height as each of the humps. It's a walking example of "3". These were the camels of Harran 4,000 years ago[15] --not Egypt.

The 15th letter, ***Samekh***, depicts a mature cedar tree in a closed-canopy forest.[11] Such trees grew on mountains near Harran- not Egypt. They were a byword for strength & support. With massive round trunks 2-3m in diameter- rising 20m before their 1st branches, they were also a byword for 'round'. The sound of Samekh was like the 'wh' in 'whew' – the sound of the wind in those trees – preserved to this day in the old Chalabi/Aleppo tradition.

Abraham, Sarah & associated transhumant merchant shepherds of Harran – which means both crossroads & caravan - would travel with loaded, Bactrian/ mountain camels up & down the mountains with the seasons: With a home-base at mid-altitude, they'd go up the mountains for summer – near the cedar forests- where there's plenty of pasture & it's cooler; down to the plains in the winter rainy season– where it's warmer and full of fresh herbage. The lowlands were also the place to trade wool, mid-altitude fruit & mountain products for the storable grains of the cities of the plain.

THE SIGNED INVENTORS OF KSAV IVRI were the promoters of the ideas at the heart of BIBLICAL TRADITION: ONENESS OF GOD and the possibilities of human betterment through the choices we're empowered and encouraged – to make.

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[10] The choice of 22 letter shapes and a nominal count of 22 letters is remarkable because: a. There are ≥30 distinct sounds for these 22 shapes – with 8 letter shapes with ≥2 sounds ea. One has 2 names: '*shin*' & '*sin*' - which are different letters in all grammatical contexts. For the 7 linguistically close alphabets, mean letter count= 28.7; σ≈1.278; range:27 to 30. 22 ≥5 standard deviations from the mean, ≤1/million. This count of 22 - when the letters might've been counted as 23, 30 or 31 –comes with an apparently purposeful invention of a new Direct Object Marker [D.O.M.]:'את' [usually pronounced '*eth*'] placed before a target noun – to replace suffixed 'D.O.M.'s found at that time [~4K yrs. ago] in Akkadian & Eblaite & retained centuries later in Ugaritic. Every 'את', in addition to its grammatical function, says: 'From beginning to end', 'complete' & '22'. In Ksav Ivri it's also an ideograph: an arrowhead pointing to a target: +➶. b. The most important number in the 1st traditional 'creation' section of Genesis: [1:1 to 2:3], is 7. There are also 22 'un-suffixed' 'את's in this section. The 7th Day is the only 'Holy Day' in the story of Creation. The Sabbath- on the 7th Day- also takes up the most space in the '10 commandments': *Shem.* 20:7-10; *Dev.* 5:11-14. Are there deliberate links between the 22-letter count in the newly invented system, the new D.O.M. and the number "7"? c. '22/7' - by far the best 3-digit fraction for 'π' [pi] - may've been a key to the predictive ability of the moon-god priests- & learned by the Hebrew inventors of Ksav Ivri from Sumerian co-inventor - converts? צ"ע d. This association strengthens the idea that the 1st & 7th letters are linked to the stars.

[11] Wilfred H. van SOLDT, p.349, "The Interaction of Syllabic and Alphabetic Cuneiform Writing In Ugarit" p. 345-355 in "The Idea of Writing: Play and Complexity" Edited by Alex de VOOGT & Irving FINKEL, 408 pdf pages, Brill, 2010

[12] Ksav Ivri letters shown here are from different sources. Exact shapes depend on locale, era, formal/informal, lapidary/ink, style, purpose & even position on a given line, e.g.: in the Moabite Stone, more visible *Alephs* at start & end of line are more carefully drawn & horizontally symmetrical. See sefer, [supra, footnote 1], for details.

[13] Part of the constellation had its 'heliacal rising' at the time of the spring equinox.

[14] 7th letter's 'modern' name: '*Zayen*', meant: 'a *weapon*', [Middle Persian/Avestan] It's likely that it was originally called '*zan*': *a portion*, or '*zabanitu*': *a balance scale*, in Old Akkadian. Details & images are in sefer at discussion of this letter.

[15] Martin HEIDE, Joris PETERS, 2021, "Camels in the Biblical World", (History, Archaeology, and Culture of the Levant 10) Pennsylvania State Univ., 433p.